Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An electron microscope comprising:

an electron beam source for emitting an electron beam;

an energy filter having an energy dispersion section for dispersing the electron beam according to electron energies, and a slit for selecting the electron beam dispersed by the energy dispersion section;

an energy filter control unit;

an objective lens; and

an energy filter electron beam detector for detecting an amount of the electron beam selected by the energy filter,

wherein the energy dispersion section is adapted selectively to turn on and off, the slit is disposed in a trajectory of the electron beam dispersed by the energy dispersion section and the electron beam bypasses the slit when the energy dispersion section is turned off, and

wherein the energy filter control unit is able to adjust one of the trajectory of electron beam and a position of the slit according to a signal, which is generated as a result of cyclically shifting an area on the slit illuminated by the electron beam and detected by the energy filter electron beam detector, while the energy dispersion section is turned on.

2. (canceled)

3. (original) The electron microscope according to claim 1 wherein the energy filter is disposed between the electron beam source and a specimen or downstream the specimen relative to a direction of traveling of the electron beam, and the electron beam selected by the energy filter is employed for observing the specimen.

4. (previously presented) An electron microscope comprising:

an electron beam source for emitting an electron beam;

an energy filter having an energy dispersion section for dispersing the electron beam according to electron energies, and a slit for selecting the electron beam dispersed by the energy dispersion section;

an objective lens; and

an energy filter electron beam detector for detecting an amount of the electron beam selected by the energy filter,

wherein the electron microscope further comprises an energy filter control unit which is able to adjust one of the trajectory of electron beam and a position of the slit according to a signal, which is generated as a result of cyclically shifting an area on the slit illuminated by the electron beam and detected by the energy filter electron beam detector.

5. (previously presented) The electron microscope according to claim 4 wherein the energy filter control unit comprises:

a shifting controller for cyclically shifting a position of the electron beam on the slit;

a signal analyzer for analyzing the position of the electron beam on the slit based on output signals delivered by the shifting controller and energy filter electron beam detector; and

a deflection coil controller for controlling an energy filter deflection coil which controls positions of the electron beam at an entrance and an exit of the energy filter.

6. (original) An electron microscope comprising:

an electron beam source for emitting an electron beam;

an energy filter having an energy dispersion section for dispersing the electron beam according to electron energies, and a slit for selecting the electron beam dispersed by the energy dispersion section;

an objective lens; and

a secondary electron detector for detecting an amount of secondary electrons emitted by a specimen illuminated by the electron beam,

wherein the energy dispersion section is adapted selectively to turn on and off and the electron microscope comprises an energy filter control unit which cyclically shifts an area on the slit illuminated by the electron beam while the energy dispersion section is turned on, thereby pinpointing the area based on signals delivered by the secondary electron detector, so that one of a trajectory of the electron beam and a position of the slit can be adjusted.

7. (original) The electron microscope according to claim 6 further comprising a deflection coil for correcting the trajectory of the electron beam coming through an exit of the energy filter, and wherein the energy filter electron beam detector is adapted to dispose downstream the exit relative to a direction of traveling of the electron beam so that the energy filter electron beam detector does not intercept the trajectory of the electron beam.

8. (currently amended) A method for adjusting an electron microscope for observation of a specimen, comprising:

carrying out dispersion with an energy dispersion section according to electron energies for an electron beam before the electron beam illuminates the specimen or after the electron beam transmits through the specimen

selecting the post-dispersion electron beam with an energy filter having a slit including at least two shields;

employing the electron beam selected with the energy filter for the observation of the specimen,

wherein the method further comprises:

repeating shifting of a position of the selected electron beam on the slit at least once from a first position where the selected electron beam is intercepted more by a first shield than by a second shield, via an ~~opening of the slit~~ intermediate position where the selected electron beam is intercepted equally by the first and the second shield, to a second position where the selected electron beam is intercepted [[again]] more by [[a]] the second shield than by the first shield;

detecting the intensity of an electron beam passing through the slit as a result of the repeating step; and

controlling the position of the electron beam on the slit according to change in the intensity.

9. (original) The method according to claim 8 wherein the method further comprises:

shifting one of each shield and the whole slit back and forth at least once;

detecting the intensity of an electron beam passing through the opening of the slit corresponding to displacement of the slit; and

controlling the position of the electron beam on the slit according to the displacement of the slit and a change in the intensity of the electron beam.

10. (original) The method according to claim 8 wherein the method further comprises:

shifting an area illuminated by an electron beam by a larger distance than a width of the opening of the slit;

detecting the intensity of the electron beam passing through the opening of the slit corresponding to displacement of the electron beam; and

controlling the position of the electron beam on the slit according to the displacement of the electron beam and a change in the intensity of the electron beam.

11. (previously presented) The electron microscope of claim 4, wherein the cyclical shifting of the area on the slit illuminated by the electron beam is carried out at a first period, and wherein the signal is generated from the detected electron beam by determining a period of the detected electron beam and comparing the determined period with the first period.